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California GARDEN

10c

FLOWER ARRANGEMENT

Three roses trim my crystal vase,—
One high, one low, and one between;
And this, I think, is what they mean:

The yellow rose in nether place
Tells me about the wondrous earth
And blooms that gem her verdant
girth;

The ruby rose at middle height
Informs of man,—what he has
thought
And how his diadem is wrought;

The lofty rose of spotless white
Reveals all life and every clod
As phases of eternal God.

—Frank Hardy Lane,
Chula Vista.

SUMMER 1942



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Notebook of a
MASTER GARDENER

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Natives-Santa Ana-San Diego

By DR. CARL B. WOLF

Over one hundred years ago Thomas Nuttall, famous English-American naturalist landed at San Diego from a hide ship which he had boarded at Santa Barbara after having collected botanical specimens there and at Monterey. In the San Diego region Nuttall, then nearly fifty years old, obtained many specimens which were new to science and which thus established San Diego as an important spot in California botanical history. Down through the years that have followed since Nuttall's visit, numerous other botanists have added to the botanical prestige of the region and one cannot long delve into the botanical accounts of the San Diego area without encountering names such as Edward Palmer, C. C. Parry, Marcus E. Jones, Charles Russell Orcutt, Lieut. Emory, Mrs. Brandegee, C. G. Pringle, Daniel Cleveland, Susan G. Stokes, Alice Eastwood and L. R. Abrams. In more recent years others have carried on the good work of exploring for plants in the San Diego region and have added materially to our knowledge. I. L. Wiggins of Stanford University made a botanical survey of the entire county in the twenties, while Frank Gander has literally combed every corner of the county with some unusual successes.

Among the botanical treasures which the above mentioned collectors found in San Diego county were many whose beauty suggested that they might be useful for gardens. Theodore Payne and the late K. O. Ses-

sions introduced several of these fine plants into horticulture, and recently Frank Gander has further stimulated interest along the same lines. Many lovely plants of San Diego County are under cultivation at the Santa Barbara Botanic Garden and at Rancho Santa Ana Botanic Garden.

At Rancho Santa Ana Botanic Garden, established in 1927, one of the primary objectives has been to bring into cultivation as many of the various kinds of California native plants as possible. Many of these are of little interest for gardens, but others, after several years of testing, are worthy of serious consideration for horticultural usage. In an article as brief as this it would be impossible to adequately present information regarding all of these fine plants. However, it occurred to me that you gardeners of the San Diego region might be interested to know about the horticultural performance and the high regard which we at Rancho Santa Ana Botanic Garden have for some of the outstanding plants native to San Diego County, and which are briefly discussed below.

Ceanothus verrucosus (Baranca Bush) is one of the numerous kinds of *Ceanothus* native to San Diego County, but in many ways is one of the most interesting. Its natural distribution is along the coast from Encinitas southward to Northern Baja California. It was discovered by Thomas Nuttall at San Diego and even yet is abundant on many vacant

lots in the eastern part of the city where it bursts into bloom in February. Its small white flowers are borne in profusion and literally cover the entire plant. The small dark green leaves and rounded growth habit make the bushes attractive in their dry habitat throughout the year.

We have grown *Ceanothus verrucosus* since 1930 when we obtained seed at Del Mar; some of the resulting plants are still alive and are in fair condition. In 1935 we again collected seed of this species in the same locality and grew several hundred plants which were later planted out under varying conditions in the Garden. Even those in heavy adobe have thus far done remarkably well. A few of these plants in the coarse rocky soil of our Cactus Garden, are over 8 ft. high, 10 ft. in spread and make a great display of white from top to bottom in early March. When once established this species needs no irrigation under our conditions and unless covered by dust remains fresh and green during the long dry summer period. For gardens in the drier parts of San Diego City where the rocky clay soil offers problems or where a dry land garden is desired we suggest the use of this fine shrub which Nature herself used so generously when she landscaped the area.

Cercis occidentalis (Western Red-Bud) ranges from western Texas to Utah, Arizona and California, where it is an abundant and showy plant in the north Coast Ranges and in the Sierras. In Southern California it is known from but a single area along the road from Cuyamaca Lake to the Laguna Mt. resorts. In regions where

the Western Red-Bud is abundant its spring blooming in April and May is heralded far and wide and many persons make special drives to enjoy the profusion of the somewhat pea-like, magenta-colored flowers which are soon followed by rounded green leaves. Later in the season the flat, reddish-purple or straw colored pods are an attractive feature.

We have successfully propagated *Cercis occidentalis* since 1928 when seeds from near Chico, Butte Co., were planted. For several years we encountered difficulty in germinating the seeds, but finally learned that if water at 160-180° F. was poured over seeds and allowed to remain for 24 hours they would germinate promptly when planted in the late fall. The seedlings can be handled in containers or in beds and planted out the following fall when dormant (the species is deciduous). With us, young seedlings planted out in the early spring of 1931 have been blooming since their fourth year and some are now about 15 ft. in height. They will grow in nearly any soil except very heavy adobe, but prefer coarse, well drained sites. Plantings in very heavy adobe in the Administration Building Grounds did well for nearly ten years, but most of the plants are now showing a decline indicating that such soils are unsuited to this species. Like many other deciduous trees and shrubs accustomed to rather cold temperatures during the winter, they do not always bloom profusely following a mild winter. This condition has been remedied with us by planting on sheltered slopes or in the partial shade of trees, and nearly as great a profusion of bloom is obtained as in colder climates. The Western Red-Bud makes an excellent subject for flower arrangements and moderate cutting for this purpose promotes vigorous new growth of the plants.

Comarostaphylis diversifolia (Summer Holly) is one of the least known of California shrubs. It is found in a few scattered localities near the coast north of Santa Monica, at Rancho Santa Fe and Jamul Valley in San Diego county, and in northern Baja California. On Santa Catalina, Santa Cruz and Santa Rosa Islands it is much more abundant, but is slightly different in that the leaves are some-

what longer and less revolute. Plants of the Islands have been called var. *planifolia* by Jepson. On Santa Cruz Island the shrubs are frequently over 20 ft. in height and in March are heavily laden with racemes of small white manzanita-like flowers. In general appearance they resemble large specimens of *Arbutus Unedo* (Strawberry-Tree). In August and September the rough round fruits are generally borne in great profusion and because of their rich red color were called Summer-Holly by the daughters of the Caire family, former owners of Santa Cruz Island.

We have grown *Comarostaphylis* since 1932 when we obtained seeds on Santa Cruz Island late in September. Seeds freshly planted in the late fall germinate within a month or two and by late spring produce seedlings 2 or 3 inches high, which will be ready to plant out in the late fall. Under our conditions 10-year-old plants on a sheltered hillside in fairly heavy soil have reached heights of over 15 ft., are fairly slender and have been flowering and fruiting for about 5 years. Care has been exercised in applying summer irrigation and there have been few losses. On the basis of the soils and exposures in which the species is found in the wild and our experience at the Garden, we suggest a partially shaded or protected spot in coarse, well-drained soil and little or no summer irrigation.

Coreopsis maritima (Seaside Coreopsis). Scattered along the San Diego county coast and into northern Baja California is a rather rare yet showy and beautiful perennial which was first found by Thomas Nuttall at San Diego. The species is not in danger of immediate extinction in the wild, but it is not at all aggressive and no doubt will soon be difficult to locate anywhere in California except at Torrey Pines Park. The fern-like foliage and ½-ft. flower stems bearing 2/3-in. clear yellow flowers, not unlike single dahlias, are produced in the wild in March and April.

Our stock of *Coreopsis maritima* came from seeds obtained near Oceanside in 1929, but none of these original plants are now alive, since under cultivation, 3 or 4 years seem to be the maximum life. Seeds planted in the fall germinate quickly and the

seedlings are easily handled. A few flowers may be produced the following spring, but the plants attain full size the next season. This year, 2-year-old plants in a partially protected spot in fine loamy soil bloomed to perfection, and some individual plants were noted with at least 50 flower heads open at one time during the early part of May. As a cut flower, *Coreopsis maritima* is excellent and is highly recommended, especially for gardens near the sea. It should not be confused with the common garden *Coreopsis* which has deep yellow flowers and herbage with an objectionable odor.

Cupressus Forbesii (Tecate Cypress) has long been known in the mountains of San Diego county, but for many years was believed to be the same as *Cupressus guadalupensis* (Guadalupe Cypress). However, in 1922 Prof. Jepson of the University of California described it as a distinct species in honor of one of his former students. C. N. Forbes, based upon specimens the latter had collected in a canyon on Otay Mt. in 1907. In addition to being an abundant tree or somewhat shrubby species over much of Otay Mt., it also grows on Guatay Mt., on Mt. Tecate, and is said to occur on Little Tecate Mt. and near Pala. We have not been able to verify these last two localities. It also grows in Baja California and on the slopes of Sierra Peak in the Santa Ana Mts., Orange county. Few of the wild trees have attained great size and for the most part the specimens are rarely over 20-25 ft. in height. Characteristically they develop a short cherry bark trunk and a much branched crown with bright green foliage. Their shrubby habit and stunted growth is due in part to the sterile rocky soils in which they grow and to the frequent fires which sweep the mountains, resulting in excessive re-seeding.

We have grown *Cupressus Forbesii* since 1927, when we obtained seeds from the Santa Ana Mts. grove. Since that time we have propagated the species extensively along with all other available kinds of Cypress from California in an effort to find a tree which could be substituted for the Monterey Cypress which has practically been exterminated in cultivation by the attacks of Cypress Canker. Thus far *Cupressus Forbesii* is among the several

most promising of the kinds under test, but several years of additional observations will be necessary before it can be safely recommended for general use. The Tecate Cypress is propagated about as easily as the Monterey Cypress. Seeds should be planted in the fall or late winter and are easily handled in containers. Seedlings transplanted to flats are somewhat more difficult to handle than the Monterey Cypress, but are satisfactory. In some of our test plots 6-year-old trees are about 30 f. high. We have also used them as a clipped hedge and have found them satisfactory.

Fremontia mexicana (Fremontia). The popularity of this species in California gardens is largely due to the efforts of Miss Sessions and Theodore Payne, but the plant itself possessed merits which readily popularized it as an outstanding large flowering shrub. For many years it was believed that *Fremontia mexicana* grew in the wild only in northern Baja California, but in 1936 Mr. Gander finally discovered it on the northwest side of Otay Mt., and it may well be that the original plants which Miss Sessions had in her nursery about fifty years ago came from seeds from Otay Mt. and not from Baja California.

We have grown limited quantities of *Fremontia mexicana* at the Garden since 1930, but never felt justified in propagating it extensively until after Mr. Gander had verified its occurrence in California. Some 8-year-old plants situated on a dry south hillside in broken sandstone have bloomed for several years, but were outstanding this April, covering the 10-ft. high, rounded bushes from top to bottom with their rich orange and reddish, 3-in., bowl-shaped flowers. Some younger plants grown from seeds obtained on Otay Mt. in 1936 are now 3 to 8 ft. high and are in somewhat similar soil, but have not yet bloomed so profusely. Plants in heavy adobe soil around the Administration Building grew rapidly for several years, but have all died.

Seeds of *Fremontia* germinate readily from late fall until early spring provided the seed coat is softened by sandpapering or immersion in hot water at 160°-180° F. for 24 hours.

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Books Reviewed

By LESTER ROWNTREE - ROLAND HOYT

One of the lessons we learned from the last war was that no matter how vehemently we worked in the vegetable garden we also needed some flowers. Mrs. Morse, whose "Gardening in the Shade" you may remember, has written a book to help us have our flowers and our vegetables, too. Charles Scribner's Sons has published it to sell for \$2.50 and either the author or the publisher has given it the name of "Garden Easily!" not forgetting the exclamation point.

The body of the book is given over to an amplified list of those shrubs, trees, perennials, annuals, vines, bulbs and herbs which will give the most beauty for the least care. Each gets a fairly full descriptive paragraph and a little (too little) on its treatment. There is a short, well written, timely introduction. The most valuable features of the book, however, are the practical little endings to some of the chapters; "Some Easy Planting Schemes Where Shrubs Predominate" caps the list of shrubs; "Some Plant Groupings for Dry and Sunny Places" comes after the chapter on perennials, and "Some Easy Planting Schemes for Annuals" winds up the paragraphs to the selected annuals.

The fourteen photographs are good and to the point and there is a pleasant reproduction of a Daumier lithograph. The first and last chapters (both opportune and short), point the way to easy gardening and help to make the book a valuable one for the war-time gardener.

LESTER ROWNTREE.

Dr. T. Harper Goodspeed has written a very readable book compiled from his own notes and those of the botanists who took part in the University of California Botanic Garden's expeditions to the Andes. Californians, especially those who contributed to the expenses of the expedition, will be particularly interested in "Plant Hunters in the Andes" (Farar and Rinehart, Inc., \$5.00.) Dr. Goodspeed is Director of the Botanic

Garden of the University of California at Berkeley and a member of the Botanical Department at this University.

If you like travelogues, you will like this book for there isn't enough in it about new plants to distract you and there is a good deal about archeology, the history of the country and the customs of its people. It is very well written for Dr. Goodspeed has the faculty of making his descriptions clear enough to be easily gripped by the imagination. The photographs are very good, though not many of them show plants, and the end-paper maps help the reader to follow the routes of the collectors.

Nicotines, which are to Dr. Goodspeed what Charlie McCarthy is to Edgar Bergen, formed the chief objective of the expedition though ornamentals were gathered in as well. Many of us have seen the giant *calceolaria tomentosa* and one or two other plants which are the result of these expeditions and are eagerly awaiting the public appearance of the rest.

LESTER ROWNTREE.

Ceanothus

If I were a gardener with a yearning for beauty . . . the truly beautiful in form and color and exquisite delicacy, and had gone far enough in involvement to appreciate an overplus of that indefinable appeal to the spirit found in nature, that is above mere beauty, I would grow the wild lilacs. Here is a group of shrubby plants overwhelmingly Californian, underfoot and roundabout, back in the hills and in the high mountains, from the south where old Mexico lies, to the north to merge with Oregon. The English, stout-hearts of the age, found them first and did something about it to the good of their superlative gardens. The French with their fancy for making things over were sure to hybridize and did, with notable results. We know they are here and seem only to see the difficult.

(Continued on Page 6)

COMPLICATIONS and COMMENT

*Call this chitter, but not tattle—call it it gossip, call it prattle—
But whate'er may be its name, call it fun—
This garden game!*

UNIVERSITY OF CALIFORNIA
COLLEGE OF AGRICULTURE
BERKELEY, CALIF.

May 6, 1942.

Editor, California Garden,
San Diego, California.

Dear Mr. Hoyt:

It was with considerable interest that I read the tribute of Miss A. M. Rainford concerning our mutual friend, the late Alfred D. Robinson. I admired him for years for his accomplishments and for his sincere and honest friendliness.

I frequently recall my last visit to see his fine collection of begonias and fuchsias. He was a source of considerable inspiration to the many friends who knew him best. He was one of those rare kind of folks who seemed always indispensable and, as Miss Rainford's closing quotation indicates, we shall expect him to find "that place where commune those kindred souls of Ancient Greece." He was a scholar and a gentleman, as well as a true friend.

Sincerely yours,

H. W. SHEPHERD,

Assoc. Prof. of Landscape Design, University of California.

Honolulu, Hawaii, March 7, 1942.

Dear Friend Jerabek:

Intended to write long before now and give you an idea of what this island offers botanically, but so much has happened that I haven't been able to carry out my intentions.

Honolulu is quite famous as a city of flowers. I arrived last fall, after the main blooming season was over and the trees were having their rest period, only one group being in bloom at the time.

Probably that is the best time to get here—between shows—so that when the new performance begins you can watch each performer come out and make his bow and compare his showmanship with those that have gone before.

I have made notes on a few trees that have brightened up our streets and parks with their displays during

the winter months, and am sending these to you, and later on will send other installments, so that at the end of the year you will at least know the principal trees to be found here.

This island has many wonderful shade trees, but the outstanding one is known as the Monkeypod (*Samanea saman*). It looks like a huge umbrella, and is found wherever you go. Closely following as shade-givers are the Earpod Tree (*Enterolobium cyclocarpum*), Banyan and Silk Cotton Tree. The Royal Poinciana is also a good shade tree, though smaller.

Most of the trees are leguminous, and thought from what I had read of the flowering trees of Hawaii that the group called the shower trees (*Cassias* and *Royal Poinciana*), which during the blooming season are covered with a blanket of flowers, dominated the flower show, but have found already that I was mistaken.

At the time of my arrival, the middle of October, the Monkeypods were practically the only trees in bloom. The flower is similar to that of *Albizia julibrissin*, though a darker pink and not quite as showy.

By November 1 the African Tulip Trees (in the *Bignonia* family) had started their season of bloom and have been at it four months already, with no signs of letting up. This is the coming tree in Honolulu, as all the new boulevards and streets are lined with them. The flowers are cup-shaped, ranging in color from orange to scarlet, and are borne in clusters on top of the trees, and make a wonderful display. These are followed by peculiar looking seed cases that stick up like bayonets.

The next display was that of the *Erythrina*s, which dropped their leaves about the first of the year and showed us their worst side. The trunks are rough and twisted and covered with spines and are very unattractive, but about two weeks later they were covered with masses of flowers in all shades of red, and were a beautiful sight. The one they refer to as Tiger's Claw (*E. indica*) seemed a more vivid red than the others. The

flowers are smaller than those generally seen on the mainland species. When the seeds form, they also are red. In normal times these are used by lei women to make leis and bracelets.

While this was going on, the Tropical Almond Trees (*Terminalia catta-pa*) got ready to change their coats of leaves. When this time comes, the old leaves turn a bright red for a few days before falling off to make room for the new crop. At a distance the trees appeared to be covered with flowers. Within a week the trees were covered with their new coats of large green leaves.

To me, these displays are all surprisingly performances, as the trees are new to me, and I don't know what to expect next. So I wasn't prepared for the next number on the program, which was more startling than the others. On visiting Foster's Gardens on February 1, found a 50-foot

HATTIE RUMBLE-SHUCKS

laughed the other day when she heard what the scientists call man . . . Homo sapiens. These same men of science, she thinks, must have sensed the humour of the situation or really are accurate because man is a "sap" at times. He can "diddle a hen with a doorknob an' thinks he can fool himself about his garden, that 'altar stairway' sloping through darkness up to Heaven."

It has been said you can fool some of the people some of the time, but that you can't fool all of the people all of the time. Well, "you never kin fool yourself any of the time . . . down deep. Mebbe you think ya dolled up the place for the garden judging, knowing all the time it could not take nothin, or just 'cause Mayme down the street had fixed her's up a little. It ain't so. That is not the reason. In the last look at it, 's beaven's own gift of somethin' of yourself to yourself, an' a natural as a let-off for the soft pulpy tissue that's the spleen, where the meanness that's in all of us seems to be."

"A wise man is him that can loosten up at times, somthin' like a shimmy dancer. Ever see daisies blowin' free-like in the wind? Don't go 'round all tight inside. Be your bigger self; get close to your garden an' eat of the Bread within you."

tree, leafless, but covered with pure lemon-yellow flowers, and to make the effect more pronounced, nearby was an African Tulip Tree covered with scarlet flowers. The sight almost took my breath away. Locally this tree is called Yellow Bignonia, but at the Gardens they told me it is *Tabebuia chrysanthe*. This week *T. triphylla*, with deep pink flowers, is putting on a show, but has not shed its leaves, so doesn't make such a fine appearance.

Ceiba pentandra was a disappointment. There are a number of these trees here—immense things, tall and wide-spreading, about 40 feet to the first branch. They shed their leaves the first of the year and developed large flower buds, but when these opened they were not a bit attractive. They are reddish-brown and open only part way. Most of them fall soon after opening.

Bomba is represented by three species—one a forest tree with cream-colored flowers about 2 inches across. The other two are smaller trees and are said to be showy in bloom, though they will come on later. Bombax doesn't seem to have buttressed roots like *Ceiba*.

There are two leguminous trees that are very shy with their blooms, although they don't have anything to be ashamed of, as their flowers are very attractive. One is *Sesbania grandiflora* var. *coccinea*, which has rosy pink sweet-pea shaped flowers, each as large as a teacup. These flowers are so well hidden that you have to raise their compound leaves in order to see them. Their seedpods are about 2 feet long, narrow, with square corners, and are straw-colored when ripe. The other shy member is *Brownea* (don't know the species), which has bright red flowers in large clusters, partly hidden in the leaves.

This brings us up to the first week in March, and makes a pretty good stopping place, and am going to send this along and hope that there will be lots more of interest to report in my next.

MRS. J. TERRELL SCOTT has been elected to the long unfilled directorate vacancy left by K. O. Sessions. Doctor and Mrs. Scott have been active in Association affairs for many years.

Don't worry about a scarcity of flowers in a land where you can buy *Anthuriums* as pot plants (in bloom) at the dime store.

With best wishes, I am

Your friend,

JOHN PRICE.

MAY MEETING

Members and friends of San Diego Floral Association welcomed a gain Mrs. Ed Lewis of Spring Valley as speaker at the May meeting. More than a year ago Mrs. Lewis gave a most interesting and instructive talk on her all-favored subject—"Chrysanthemums"—and this time, two-fold matter was presented, as she has added "Fuchsias" to her specialized acreage.

With more than sixty varieties of *Fuchsia* specimens of many sizes and color combinations, she called attention to the names, cultivation, soil, care, fertilization, insect attacks, etc. *Fuchsias* do best in rich light soil, and will speak for full shade, but will accommodate themselves to almost anything. Tree *Fuchsias* may be made from any variety having stiff stems.

Mrs. Lewis has one of the largest collection of *Chrysanthemums* in the state—over 300 varieties of all types—and from her nursery in Lemon Grove, purchaseable plants are now ready for planting for flowering in October to November. For adobe soil, she suggested mixing pine sawdust—not redwood—into the dirt, in which plants will grow most favorably. For information or material regarding plants, write to Department of Agriculture, Extension Service, for bulletin, Mrs. Lewis advised.

Mr. Jerebek opened to notice a collection of specimens among which was the *Tulbaghia sepecca* of the lily family.

Mrs. Mary A. Greer, president, briefly reviewed the Garden Visits which have proved most valuable and useful to the floral minded attendants. Proposed plans for the coming Geranium and Pelargonium show, to be staged May 30 and 31 were made. Many fine cuttings of double poinsettias and other plants were brought for distribution.

G. M. G.

JUNE MEETING

A sizeable gathering of Floral association members and guests assembled

in the Natural History Museum building for the society's annual meeting. Mrs. Mary A. Greer, president, presided. There was an election of directors and short reports were given—the treasurer's report by Mr. Arthur Shoven was unusually gratifying.

Mrs. Greer in mentioning the fourth annual Pelargonium and Geranium show said, "We are the first to put on shows of this kind in Southern California." Appreciation was expressed to all who so assiduously and dependably assisted with the successful display. The exhibits were outstanding as being most unique and one which received consistent admiration was made by Mr. Max Matousek of Pacific Beach.

"Flowers in Art" was the subject of the talk given by Mrs. Julia G. Andrews, art authority. Illustrating her talk, Mrs. Andrews exhibited many slides showing that flowers in art are age old, dating back to primitive man. Among the specimens presented was a skirt of Tapa cloth from Samoa prepared from the inner bark of the paper mulberry on which the flower designs were especially pleasing. Tracing art down through the centuries, flowers and trees rose to a place of great importance. "There must be rhythmic repetition—they must have circular rhythm, must have opposition, and transition," she said.

Donations of Coral tree seeds, and samples of Gold o' Gardens—a soil porosity builder for stimulating plant health and growth, were given all persons in attendance.

—G. M. G.

GERANIUM SHOW

Thanks to the courtesy of the Natural History Museum, the Floral Association was able to carry out its annual Geranium Show. The location, inside the west entrance of the museum, was a very thoughtful one as it was so accessible that a large crowd was able to enjoy the display on May 30th and 31st.

The genus *Pelargonium*, which is the scientific name for most plants we call geraniums, was introduced to England from South Africa in 1690. It includes what we usually know as the Martha Washington type. The common bedding type, or *P. zonale*, came later, in 1710. The first doubles appeared in 1860. So, with more than

FROM THE NOTEBOOK OF A MASTER GARDENER

a century of cultivated background, it is fitting that this attractive plant should merit a show all of itself. The interest of the visitors from all over the country was considerable. Their intelligent questions, their appreciation of the beauty of the exhibits, and the speed with which they acquired the fine cuttings so generously donated by the members, all went to satisfy the hard-working committee members that their effort was worth while.

Of course, the outstanding part of the exhibit was that wonderful array of *P. domesticum*, so well shown on panels, that would have done justice to the Fairy Queen herself. It was a professional exhibit from our never-failing friend, Max Matousek; an instant objective for superlatives of all who entered the room. We never succeeded in counting all the varieties, being too intrigued by their beauty to study their variations, but there must have been over a hundred.

A blue ribbon winner in the ordinary geranium class was Mrs. Barry. Her exhibit was a striking proof that this variety can be grown to vie for honors with any other member of the plant kingdom. Some of the flower heads were six or more inches across, with huge leaves. There were many colors, both single and double. She tells me they do best with some shade and a little pinch of blood meal now and then. Of course they are far lovelier grown in the ground than in pots.

Mr. Bradley of National City had a blue ribbon on his well-grown pelargoniums. Both he and Mrs. Gardner, together with Mrs. Barry, had some of the scented and variegated leaf types.

As usual, Alice Greer could be depended on to show us how well pelargoniums can be arranged. (They really keep far longer than the average flower, for cutting). Miss Schweider, Mrs. Cowling and Mrs. Jenkins had ribbons on compositions that gave the spectators new ideas.

Mrs. Greer felt that the opportunity for contact with fellow garden lovers and their pleased comments proved that the Floral Association was doing its bit to make our war visitors welcome here.—A.M.C.

The leaves of fuchsia are now being injured by thrips, small, slender insects that chafe the leaf surfaces, scarring them. Inasmuch as much of the damage has already been done, about the only thing you can do is to try to protect the new growth as it develops and look ahead to controlling next year. Most of the injury to fuchsia and other garden plants attacked by this insect is earlier in the season.

If you will examine these plants carefully, particularly on the undersides of the leaves, you can detect quite probably, if any insects are still present. They are very small and slender, usually light colored, and are quick moving. A spray of some tobacco preparation, as Black Leaf 40, or pyrethrum compound, as New Evergreen, is the best thing to apply. Be sure to cover both the upper and lower leaf surfaces and repeat in about ten days to two weeks. This is important.

Book Review

(Continued from Page 3)

ties involved in their culture.

This attitude is changing. In Santa Barbara there is a botanic garden that has taken on the job of fixing that change. First they gathered together species and variety forms in the most complete collection anywhere. Next they studied conditions and requirements, likes and dislikes . . . in a word, culture. And all this time they did not overlook that phase called propaganda which seems so necessary to put something over with an immovable or reluctant people to their good.

Maunsell Van Rensselaer, director of this garden, tells the story in these words: "Man's quest for things of beauty and distinction to decorate his surroundings has been second only to his search for the bare essentials of existence. Among his discoveries, those things which are uncommon and hard to find, or brought from distant places, have always been most

prized. As a consequence of his craving for beauty, ornamental plants for his garden have been sought the world over . . . blue flowering shrubs have always been welcomed because of their rarity. It was therefore inevitable that the various species of ceanothus, with their masses of lovely blue flowers of many shades, should soon become known and popular."

This quotation is from *CEANOTHUS*, a new, most complete and very attractive publication of the Santa Barbara Botanic Garden, the reading of which will be informative as to the why and wherefore of such a place and its organization. The book is in two parts, the first of which is more popular in treatment and is written by Mr. Van Rensselaer with the background of years in the Garden. Each species is examined thoroughly and critically in the light of its possible use in garden or landscape development. Its range in nature, soil preference, exposure, form of the individual and timing in bloom, availability, with bits of history and important points in culture are covered with understanding and knowledge from firsthand contact.

A careful and exhaustive treatment of propagation, the planting out and care of these temperamental individuals is offered as a chapter by Alfred J. Stewart, Horticulturist. This is very important to any grower since few groups of plants will have as high a percentage of loss in initial setting out, and a continuing success depends very largely on one's intelligence, which means finding out something about irrigation, pruning, etc. A fine point is the gradual weaning of the plant away from moisture.

The second part is more technical. It is the result of twenty-five years' systematic study of this genus by Howard E. McMinn, botanist of Mills College, Oakland, California. Mr. McMinn is well known as an observer and writer on the flora of the Pacific Slope. Among the many features presented is a very simple key for identification of species and this

is carried back into the descriptive account of species, helping to show more clearly relationships. Studies in the cytology of some species made by M. A. Nobs are included and finally, to show how thoroughly the job has been done, Herbert L. Mason provides a chapter on the distributional history and fossil record of the genus. The botany of certain groups of plants seems never to settle down to a standard and acceptable condition until studied on the ground. It is my feeling that this is not only a scientific contribution, the systematic botanists of the world will find here that work on the ground which will clear up many obscure points in a genus that is truly localized in nature.

This work rates all the space given here and more, the casual reader notwithstanding. If he or any other in quest of the great beyond in beauty will stoop only once in the exploration of the wild lilac flower, he must rise with his soul charged with that thing we call inspiration and know something of the subjective meaning behind the work of these people, and its meaning to him.

—Roland Hoyt.

The Blair couple (Laurence and Edna) have given us another book. Remember their "Garden Clinic"? This time it's on that all-important subject, "The Food Garden." (Macmillan, \$2.00.)

Since the Blairs live, garden and write in the East, what they have to say in "The Food Garden" applies directly to the growers of vegetables and fruits who relieve possible shortages in that part of the country.

The book, however, is very generously illustrated with line drawings showing the vegetable (or fruit), its seedling, mature foliage, the pests which beset it and the treatment it requires; all this in the still-movie-and-caption manner which amateurs now expect from the modern writer on gardening methods. These pictures alone constitute a good guide for the California vegetable grower, will at a glance give him the treatment of his table vegetable from watercress tub to corn on the cob and will many times over save him the price of the book.

LESTER ROWNTREE.

AMERICA SELF-SUFFICIENT

By SAMUEL B. PETTINGILL

According to Secretary of Commerce Jesse Jones, and W. L. Blatt, assistant to Donald Nelson, the British and Dutch as far back as two years ago persuaded our high officials from developing American synthetic rubber. It is natural, of course, that interests holding a 97 per cent world monopoly did not want to lose their huge American market to American sources of supply. They said the Far East was safe—that Singapore was impregnable, etc. The result is an unfortunate paradox.

We now find ourselves isolated from rubber and tin. Not only that, but our British friends will be largely dependent upon American synthetic rubber which they urged us not to develop. On the other hand, a sturdy policy of putting American interests first two years ago would now be providing tires for both British and American motor transport. One wonders if the wisdom of Washington's Farewell Address is completely out of date when he warned us against foreign influence in American affairs.

Not only did the foreign rubber combine protest against the threat of competition from American synthetic rubber, but, according to Secretary Jones, it refused to sell as much natural rubber as he wanted to buy for our own stock pile, for fear of depressing prices, while continuing to sell to the Japs.

It is events such as this which focus attention upon the efforts of the American petroleum industry with buna and butyl synthetic rubber and the Farm Chemurgic Council to make America more nearly self-sufficient by finding new uses for our own raw materials. I quote some excerpts from a recent address by Wheeler McMillen, president of the Chemurgic Council:

"The Russians are raising rubber on their farms from a kind of dandelion from which they get 150 to 200 pounds of rubber to the acre. But we do not have a single seed of this dandelion.

"Probably not more than five hundred plants are grown as crops every-

where in the world in any commercial sense or quality. Yet more than 300,000 kinds of plants have been classified by botanists; more than 15,000 in North America. Is it possible that only a fraction of one per cent of the number of plant species has value to mankind? Or is it that mankind has learned only a fraction of one per cent of the ways in which plants may be used?

"The farflung vistas of the plant frontier reach beyond the boundaries of the imagination. The organic chemist can turn these compounds into heretofore unknown materials for the service of civilization.

"The explorations of plant substance by organic chemistry have probably no more than reached the stage of the Norsemen—with Columbus yet to come. A weed is simply a plant man has not yet learned to use.

"Unimaginative men in the United States have handicapped efforts toward the economic and military impregnability that goes with a high degree of self-containment. Those who understand have advocated that the United States should produce within its borders, or at least find out in advance of an emergency HOW to produce every item that might become an essential to military or civilian strength in time of war.

"Those who through recent years have opposed our efforts to enable American farmers to produce the commodities required by American markets now find themselves in the unenviable position of having committed unwitting sabotage upon the national defense.

"No one can grasp the amazing productive potentialities of the plant kingdom without seeing clearly that nations can gain far more wealth by cultivation and utilization than they can ever hope to steal by conquest.

"There can be but one assurance of freedom from fear. That is the strength that is created by productivity."

Farmers must band together and use their collective power to further the development and introduction of new plants for new uses to be grown on American farms. Thus they will increase the income of American farm families, help to broaden the market for U. S. labor and industry and safeguard the nation.

Natives

(Continued from Page 3)

Seedlings are rather difficult to handle and where only a few plants are wanted we suggest that they be purchased from a nurseryman and planted out in the late fall so that they can become well established by summer, thus avoiding the necessity of excessive irrigation during hot weather. After the first season the plants should be able to do without irrigation and if properly placed in a sunny spot in coarse, well-drained soil, will live for many years.

Libocedrus decurrens (Incense-Cedar) is a widespread tree from the Cascade Mts., Oregon, to the San Pedro Martir Mts., Baja California. In California it is particularly abundant in the Sierras and other ranges away from the coast. Its altitudinal range is from 500-7500 ft., but it is generally best developed at middle elevations, forming trees 80-100 ft. in height or rarely to 150 ft. Its common tree associates are the Yellow Pine, Sugar Pine, White Fir, Douglas Fir, and Kellogg Oak. The regions in which Incense-Cedars grow receive a variation in rainfall from as little as 15 in. to well over 50 in., but the trees grow in such diverse habitats that there is great variation in their appearance. Individual trees growing in the open retain their branches nearly to the ground and because of their rich dark green foliage and rich brown bark are of outstanding beauty. The species is not plentiful in San Diego county, but some characteristic specimens can be seen in the higher parts of the Cuyamaca Mts.

Incense-Cedar has been cultivated for about 90 yrs. and in California many cultivated specimens are over 50 ft. high. Our plantings number several hundred trees, of which the largest are on an east slope hillside in rich loam. These were grown from seed obtained in Sequoia National Park in 1927, and planted out as small seedlings in February, 1929. Some of these are now 25 ft. high, 10-12 ft. in spread and have trunks 10-13 in. in diameter at the ground. Well grown trees in gallon cans are available from nurserymen, but those who would grow their own plants will find it not at all difficult provided

fresh seeds are planted in the late fall and care is taken in handling the seedlings to avoid coiled roots. We suggest the planting of Incense-Cedars in California gardens because they are one of our most beautiful conifers and because, unlike their common tree associates, they thrive under very diverse conditions, even at low elevations and near the ocean. Equally fine specimens have been noted in lawns and on rather dry hillsides. Because of their fairly narrow growth habit they are suited to small gardens where such popular, but often misplaced crees as Deodar Cedars, are far too large.

Penstemon heterophyllus australis (Violet Penstemon) does not differ markedly from *P. heterophyllus*, but is confined mainly to a distinct geographic area, essentially in the coastal area from Santa Barbara to San Diego at elevations of 1000-5000 ft. It is a common perennial 1-2 ft. high found scattered on sunny slopes in chaparral or occasionally forming stands in the open on burns or roadcuts. It chooses rocky, gravelly, or coarse soil where there is excellent drainage and little competition by annuals and grasses. In the wild it blooms mainly in June, July and August (latest at higher elevations). It is a common and showy species in the mountains of San Diego county and may be seen blooming in late spring along U. S. Highway No. 80 west of Pine Valley, where it is common on disturbed soils.

We have propagated *Penstemon heterophyllus australis* since 1933 when we collected seeds on Santiago Peak in the Santa Ana Mts. at an elevation of about 5000 ft. Seeds planted in flats in the fall are easily handled in pots and can be set out the next spring, or can be grown in outdoor seed beds and transplanted bare root the following fall. By the latter method great quantities of plants have been successfully handled very economically. The plants reach full size and bloom profusely when 2 years old, but are short-lived and must be replaced every 3 or 4 years. Large plants can be divided in winter and 50-100 rooted stems obtained from a single individual. Under our conditions the plants bloom profusely in May and June, but some flowers

are produced much earlier and later. Although we have planted this species in many types of soil and have had reasonable success even in heavy adobe, it does best in dry sunny sites in coarser soils where little water is applied, especially during the summer months following blooming.

Prunus ilicifolia (Holly-Leaved Cherry). This shrub is found in the wild from Napa county southward through the coast ranges to San Diego county and northern Baja California. Many of the plants of southern California possess leaves with very spinose and undulate margins, while in the north some colonies have leaves more nearly like those of *Prunus Lyonii* (Catalina-Cherry). On sterile, coarse, rocky soils in the chaparral the plants are frequently not more than 6 ft. in height, while in sheltered ravines and in somewhat richer soils they attain tree-like proportions. Fine wild plants can be seen along the road from Mt. Tecate to Jacumba or from Jacumba to Pine Valley, but nowhere in those areas are they abundant or conspicuous.

In the Garden our oldest living collection is of 157 plants from 1927 seeds, gathered near Pine Valley, San Diego county. These plants are on a hot, dry, south hillside, and though they have received little or no water during the last ten years, only nine plants have been lost. The largest plants of this collection are now only a little more than four feet high, but other plantings in better soils have averaged more than a foot of growth per year. Plantings in heavy adobe soils within the Garden area have generally made excellent growth for several years, but then die suddenly from the attacks of root-fungi. We recommend *Prunus ilicifolia* as one of the finest evergreen shrubs for dry, coarse and well drained soils, in situations where irrigation is not practiced except to establish the plants. When used as a trimmed hedge it can be kept indefinitely at almost any desired size with not more than two prunings per year. Propagation is by seeds which should be planted in the early fall and when proper care can be given will produce excellent results if placed directly in the ground where the plant is to remain, since the seedlings quickly develop long taproots.

Rhus ovata (Sugar Bush) is an out-

standing large shrub, native to our nearby hills, and has been extensively propagated and planted out since the early days of the Garden. With us it is an ideal plant for dry situations in coarse, well-drained soils, but is short-lived in clay soils, or with irrigation, except to establish the plants. Its 3-4 in. long leathery leaves are a rich green at all seasons and appear exceptionally so at the end of our long dry summers. The terminal flower clusters are formed in the late fall, and in mid-winter are a rich reddish-purple, making the branches attractive and useful for interior decoration. The small, creamy white flowers appear from March to early May and are followed by reddish, glandular fruit in 2-3 in. clusters on the female plants. Propagation is by seeds which should be soaked for 24-48 hrs. before planting in the early fall. Good-sized plants can be produced in time for fall planting the next season.

Wild plants can be seen in most sections of the San Diego county back country, but along California State Highway No. 29, north of Warners Hot Springs, the bushes seem to reach perfection.

Romneya trichocalyx is closely related to *R. Coulteri* (Matilija-Poppy) and by many botanists is considered merely as a variety of the latter. In *R. trichocalyx* the stems are more slender, the leaves are dissected into narrower lobes, the peduncles are setose just below the flower, the calyces are covered with setose bristles and the sepals are beakless. It is found in the mountains of Ventura county and in the San Diego back country. Along California Highway No. 94 between Dulzura and Potrero, the plants are abundant and their 6-8 ft. tall slender stems, crowned with large white flowers with yellow centers, are easily spotted swaying in the breezes in May and June.

We have propagated *R. trichocalyx* since 1931 when we obtained seeds in Cottonwood Valley, San Diego county. Propagation from seeds is rather difficult in that the seedlings are delicate. The easiest method of propagation is to dig suckers in the late fall from established plants. These should be planted where wanted, or they may be first established in containers. Flowers will be produced

the second year. When once established the plants spread by suckers and great clumps are eventually produced. For best results the old growth should be cut off nearly to the ground each fall, since the best flowers are produced on the new vigorous shoots sent up each spring. Light, well-drained soils are best, but many splendid plants are grown in heavier soils, provided water does not accumulate in winter and irrigation is not practiced in the summer. A sunny site in a gravelly wash is ideal. *R. trichocalyx* is better than *R. Coulteri* as a cut flower in that the long stems are more slender and less leafy. A splendid hybrid with extremely large, crinkly petals is offered under the name of "White Cloud" by Armstrong's Nurseries, Ontario, and appears to be a cross between *R. trichocalyx* and *Coulteri*.

Umbellularia californica (California Bay Tree). Visitors in Southern Oregon who buy beautifully turned articles of "Oregon-Myrtle" are frequently told that the tree grows only in the immediate vicinity. Fortunately the species is widespread in California from the Oregon border to the Mexican line and grows in both the Coast Ranges and in the Sierras. In the rich lowland valleys of central and northern California *Umbellularia* grows to great size; one tree which we observed in Marin county in 1934 was estimated to be at least 75 ft. high, 112 ft. in spread and 26 ft. in circumference at its smallest point below the main forks. However, in southern California it is generally shrublike and in San Diego county is not particularly common, but specimens can be seen in Noble Canyon, Laguna Mts.

Our oldest Bay Trees at the Garden are nearly 13 years old and nearly 25 ft. high. Situated on a gentle north hillside in heavy black adobe, they receive frequent irrigations and have rich dark green foliage at all seasons. Other plantings in dry situations are thriving, but their growth is less than one-half as rapid, and their foliage is a much lighter and yellower green.

Propagation of the California Bay Tree is by seeds which should be planted in the fall as soon as possible after the fruits mature. Germination

requires several weeks or even a couple of months, but the seedlings are easily handled and their fibrous root system takes kindly to culture in cans or large pots. Plants 6-12 in. high can be produced the next fall and should be set out. The California Bay Tree makes an effective background, border or hedge, and with pruning, can be maintained shrublike for many years. If planted in one's garden the pungent aroma of its leaves, which are now being substituted for the bay leaf of commerce, will serve to remind one of the numerous mountains and valleys where it is native.

Army-Navy Benefit

Twenty thousand flower, vegetable and fruit shows will be held throughout the United States during September in an effort to raise \$2,000,000 for the joint benefit of the Army Emergency and Navy Relief Funds.

This greatest marshaling of the forces of gardening and horticulture in the history of the world will be the result of the combined efforts of all phases of gardening, from its many thousands of individual garden clubs in the nation to its specialty groups devoted to the interest of one plant. Thirty-seven national societies, amateur, professional and commercial, are being invited to appoint state representatives in each of the forty-eight states, who in turn will serve as state committees to stimulate the effort.

The committee is recommending to all local exhibits that prizes as such be eliminated and that in their place, a seal signifying the award, be given. Blue will be used to designate first, red, second, and white, third. Admission price to the various shows is set at a minimum of 25 cents and all shows will be expected to turn in at least 85 per cent of their gate receipts.

A national honor role of garden and horticultural organizations participating in the movement will be formed and as fast as any group signifies its intention of participating, its name will be added to the role. Until state committees are functioning, all correspondence should be addressed to Victory Garden Harvest Shows, care of Navy Relief, 730 Fifth Avenue.

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